

AMENDMENTS

In the Claims:

This listing of claims will replace all prior versions, and listings of claims in the application. Changes to the claims are shown with additions underlined and deletions in ~~striketrough~~. No new matter has been added by this amendment to the claims.

1. (Currently Amended) A ~~computer implemented method for analyzing at least one concept within at least one category of objects, method~~ comprising the steps of:

(i) ~~selecting, by a user, of the at least one category for inclusion in an initial set of categories to be analyzed; receiving from a user a selection of a first category and a second category from among a plurality of categories associated with a set of objects, the first category being associated with a first subset of objects from among a plurality of subsets of objects, and the second category being associated with a second subset of objects from among the plurality of subsets of objects, each of the first subset and the second subset being included in the set of objects and including at least one object;~~

(ii) ~~selecting, by the user, and extracting the at least one concept from the initial set of categories' objects to create an initial set of one or more concepts; receiving from a user a selection of a concept from among a plurality of concepts associated with the first category;~~

(iii) ~~performing multi-dimensional analysis, based on user input, on the at least one concept present in the initial set of categories, the multidimensional analysis comprising selection by the user of a subset of concepts from the initial set of one or more concepts, based on the initial set of categories, the multidimensional analysis indicating the presence and concept to determine a presence or absence of each the concept in each of the first subset of concepts, for each category and the second subset;~~

(iv) ~~sending the analysis results to an output device, wherein, for each category, for each of the first subset and second subset, if the concept is present in the category, that subset, providing an indication of a strength of presence of the concept in that the category is indicated to the user through the output device, subset; and~~

~~if the concept is absent from the second the category, the subset, providing an indication of an absence of the concept from the second the category is explicitly indicated to the user~~

~~through the output device by explicitly referencing the concept, the category, subset, the indication of the absence including a reference to the concept and the second absence of the concept from category.~~

2. (Currently Amended) The method of claim 1, wherein the concept is a first concept, the indication of a strength of presence is a first indication of a strength of presence, and the indication of an absence is a first indication of an absence, further comprising the steps of:

(v)—for each of the first subset of objects and the second subset of objects, determining, based on the step of multi-dimensional analysis, if a second concept is present in that subset;

performing multi-dimensional analysis, discovering if at least one additional on the second concept exists to create a second set of concepts to determine a presence or absence of the second concept in each of the first subset and the second subset;

(vi)—repeating steps (ii) through (iii) if the at least one additional concept exists;

(vii)—discovering if at least one additional category exists for inclusion in the initial set of categories to create a second set of categories; and

(viii)—repeating steps (ii) through (vi) if the at least one additional category exists.

for each of the first subset and the second subset, if the second concept is present in that subset, providing a second indication of a strength of presence of the second concept in that subset; and

if the second concept is absent from that subset, providing a second indication of an absence of the second concept from that subset, the second indication of the absence including a reference to the second concept and a category that is associated with that subset.

3. (Currently Amended) The method of claim 1, wherein the concept is a first concept, further comprising the steps of:

(v)—determining, based on the step of performing multi-dimensional analysis, at least one concept in the initial set of concepts to be deleted;

(vi)—deleting the determined at least one concept from the initial set of concepts to create a second set of concepts; (vii)—repeating steps (ii) through (vi) if an additional concept

~~exists that needs to~~ that a second concept from among the plurality of concepts should be deleted from the ~~initial set~~ plurality of concepts;

~~_____ deleting the second concept from the plurality of concepts;~~

~~(viii) — discovering if at least one additional~~ determining if there exists a second category exists to be included in the ~~initial set of categories to create a second set~~ plurality of categories; and

~~(ix) — repeating steps (ii) through (vii) if the at least one additional~~ second category exists, repeating the detecting and deleting.

4. (Currently Amended) The method of claim 1, wherein the ~~at least one category~~ set of objects is comprised of at least one of:

structured; data;

unstructured data; and

semi-structured data.

5. (Canceled)

6. (Currently Amended) The method of claim 1, wherein the user selection of the first category is based on one or more of ~~upon a condition, wherein the condition is selected from the group consisting of a location of the at least one category:~~

~~_____ a location of the first subset of objects~~ on a computer disk drive, a LAN, or a WAN;

a location of the ~~at least one category~~ first subset of objects within a database;

a URL address of the ~~at least one category;~~ first subset of objects;

a presence of a predefined concept, keyword, or text in the ~~at least one category~~ first subset of objects; and

an absence of a predefined concept, keyword, or text in the ~~at least one category~~ first subset of objects.

7. (Currently Amended) The method of claim 1, wherein the ~~at least one object category~~ first subset of objects comprises an electronic file.

8. (Original) The method of claim 7, wherein the electronic file is selected from the group consisting of a Program File (*.exe), Text File (*.txt, *.prn, *.csv), Word Document (*.doc), Rich Text Format (*.rtf), Windows Write (*.wri), Word for Macintosh (*.mcw), MS-DOS Text with Layout (*.asc), Text with Layout (*.ans), E-mails (*.eml), Outlook Address Book (*.olk), Personal Address Book (*.pab), WordPerfect file (*.wpd), Schedule+ Contact (*.scd), Powerpoint (*.ppt), Harvard Graphics Show (*.sh3), Harvard Graphics Chart (*.ch3), Freelance Windows file (*.pre), Excel File (*.xl*), Adobe Acrobat File (*.pdf), Web Page (*.htm*, *.asp, *.jsp), Query File (*.qy), Lotus 1-2-3 File (*.wk*), Quattro Pro/Dos File (*.wq1), Microsoft Works File (*.wks), Works for Window (*.wps), Microsoft Access Files (*.mdb), Dbase Files (*.dbf), SYLK Files (*.slk), Data Interchange Format File (*.dif), Backup File (*.bak), Quattro Pro 1.0/5.0 (win) (*.wbl), Text Recovered from any File (*.*), Graphic Interchange Format (*.gif), Windows Bitmap (*.bmp), JPEG file interchange format (*.jpg), Tag image file format (*.tif), portable network graphics (*.png), Kodak Photo CD (*.pcd), PC Paintbrush (*.pcx), Raster file (*.ras), Audio File (*.wav, *.snd, *.aif, *.aifc, *.aiff, *.wma, *.mp3), CD Audio Track (*.cda), Media Playlist (*.asx, *.wax, *.m3u, *.wvx), MIDI File (*.mid, *.rmi, *.midi), Movie File (*.mpeg, *.mpg, *.mlv, *.mp2, *.mpa, *.mpe), Video File(*.avi, *.wmv), Windows Media File (*.asf, *.wm, *.wma, *.wmv), and Tactile Sensing File in ASCII, LabView, or MATLAB formats.

9. (Currently Amended) The method of claim 1, ~~wherein the step of extracting the at least one concept is further comprised of at least one of the following steps:~~further comprising:

extracting the concept from the set of objects, the extracting including one or more of:

~~(a) generating a common format of the set of objects using an application programming interface (API) to obtain;~~

generating a common format of the at least one category;~~(b) set of objects using an extraction algorithm to obtain a common format of the at least one category;~~

~~(c) using an application to determine~~determining an image intensity of the at least one category set of objects;

(d) — ~~using an application to determine~~determining at least one boundary within the at least one category ~~set of objects~~;

(e) — ~~using an application to map~~mapping audio waveforms within the at least one category ~~set of objects~~ to a text format; and

(f) — ~~using an application to convert~~converting non-textual information within the at least one category ~~set of objects~~ into text.

10 – 13. (Canceled)

14. (Currently Amended) The method of claim 1, wherein the ~~step of~~set of objects is a first set of objects, and the performing multi-dimensional analysis ~~further comprises at least~~includes one ~~or more~~ of the following steps:

(a) — ~~determining a number of the at least one category within the initial set of~~
~~categories~~;

(b) — ~~determining a frequency of occurrence of the at least one concept within the~~
~~initial set of categories~~;

(c) — ~~determining a frequency of occurrence of the at least one concept within a subset~~
~~of the initial set of categories~~;

(d) — ~~determining a frequency of occurrence of the at least one concept within a set~~
~~outside of the initial set of categories~~;

(e) — ~~determining a normalized frequency of occurrence of the at least one concept~~
~~within the initial set of categories~~;

(f) — ~~determining a normalized frequency of occurrence of the at least one concept~~
~~within a subset of the initial set of categories~~;

(g) — ~~determining a normalized frequency of occurrence of the at least one concept(s)~~
~~within a set outside of the initial set of categories~~objects within the first subset of objects;

determining a frequency of occurrence of the concept within the first set of objects;

determining a frequency of occurrence of the concept within the first subset of objects;

determining a frequency of occurrence of the concept within a second set of objects
different from the first set of objects;

determining a normalized frequency of occurrence of the concept within the first set of objects;

determining a normalized frequency of occurrence of the concept within the first subset of objects;

determining a normalized frequency of occurrence of the concept within the second set of objects;

(h) ~~—determining an electronic path to the location of the at least one object category~~first subset of objects;

(i) ~~—determining at least one a characteristic of the at least one category~~first subset of objects;

(j) ~~—determining at least one concept type for the at least one concepts within the initial set a~~concept type for the concept of categories;

(k) ~~—determining a number of categories which contain a set of concepts within the initial set of categories;~~

(l) ~~—determining a number of categories which contain a set of concepts within a set outside of the initial set of categories;~~

(m) ~~—determining a definition for the at least one~~first concept; and

(n) ~~—if the first subset of objects contains the concept, determining a position of the at least one concept within each category containing the at least one concept~~the first subset.

15. (Currently Amended) The method of claim 14, wherein the ~~at least one~~ characteristic is ~~selected from the group consisting of one of:~~

a file extension;

a creation date, ; and

an effective date and a status.

16. (Currently Amended) The method of claim 14, wherein the ~~at least one~~ concept type is a P parent type.

17. (Currently Amended) The method of claim 14, wherein the ~~step of~~ performing multi-dimensional analysis includes slicing-and-dicing across at least one dimension of the ~~initial~~-set of ~~categories~~objects.

18. (Currently Amended) The method of claim 17, wherein the at least one dimension is ~~selected from the group consisting of one of:~~

a time dimension, a geographical location dimension, an electronic location dimension, a person dimension, a multiple-person dimension, a business unit dimension, an organization dimension, a process dimension, a product dimension, a service dimension, a subject dimension, a category dimension, a concept dimension, a concept type dimension, a user viewpoint dimension, and an entity dimension in a structured database.

19. (Currently Amended) The method of claim 1, wherein the ~~step of~~ performing multi-dimensional analysis further comprises at least one of the following ~~steps~~:

(a) ~~generating reports~~a report based on the analysis; and

(b) ~~presenting~~ displaying results of the analysis in one or more of:

a graphical ~~or~~format; and

a visual format.

20. (Currently Amended) The method of claim 1, further comprising ~~the step of:~~

using the multi-dimensional analysis to discover a result, ~~wherein the result is selected from the group consisting of being one of:~~

a trend of concepts within the ~~initial~~-set of ~~categories~~,objects;

a pattern of concepts within the ~~initial~~-set of ~~categories~~,objects;

a concept exception within the ~~initial~~-set of ~~categories~~,objects; and

at least one relationship between concepts within the ~~initial~~-set of ~~categories~~objects.

21. (Currently Amended) The method of claim 1, wherein the method further comprises at least one of ~~the following steps~~:

storing the ~~at least one~~ concept in a concept repository; and
sharing the ~~at least one~~ concept with one or more other users.

22. (Currently Amended) The method of claim 2, ~~wherein the method further comprises the step of comprising:~~

creating a business rulesrule to be used in the a transformation of data into a datastore.

23. (Currently Amended) A ~~computer implemented method for analyzing at least one concept within at least one category of objects~~ method, comprising the steps of:

(i) ~~selecting, by a user, of an the at least one category for inclusion in an initial set of categories to be analyzed;~~

(ii) ~~selecting, by the user, and extracting the at least one concept from the initial set of categories' objects to create an initial set of concepts;~~

receiving one or more signals that define a plurality of categories associated with a set of data objects;

(iii) ~~performing multi-dimensional analysis, based on user input, on the at least one concept present in the initial set of categories, the multidimensional analysis comprising selection by the user of a subset of concepts from the initial set of one or more concepts, based on the initial set of categories, the multidimensional analysis indicating the presence and absence of each concept in the subset of concepts, for each category on a concept, the multi-dimensional analysis including determining a frequency of occurrence of the concept in a first subset of the set of data objects, the first subset being associated with a category from the plurality of categories; and~~

(iv) ~~sending the analysis results to an output device, wherein, for each category, if a concept is present in the category, the strength of presence of the concept in the category is indicated to the user through the output device, and~~

~~if the concept is absent from the category, the absence of the concept from the category is explicitly indicated to the user through the output device by explicitly referencing the concept, the category, and the absence of the concept from the category.~~

outputting to a display a graphical representation of the frequency of occurrence and the category.

24. (Canceled)

25. (Currently Amended) The method of claim 23, ~~further comprising the steps~~wherein the performing multi-dimensional analysis includes one or more of:

~~(v) — determining, based on said performing step, whether at least one concept in the initial set of concepts is to be deleted;~~

~~(vi) — deleting the determined at least one concept from the initial set of concepts to create a second set of concepts;~~

~~(vii) — repeating steps (ii) through (iii) if an additional concept exists that needs to be deleted from the initial set of concepts;~~

determining a frequency of occurrence of the concept within the set of objects;

determining a normalized frequency of occurrence of the concept within the set of objects;

determining a normalized frequency of occurrence of the concept within the first subset of objects;

determining an electronic path to the location of the first subset of objects;

~~(viii) — determining whether at least one additional category is to be included in the initial set of categories to create a second set of categories~~

determining a characteristic of the first subset of objects; and

~~(ix) — repeating steps (ii) through (vii) if the at least one additional category exists.~~

determining a concept type for the concept.

26. (Currently Amended) The method of claim 23, ~~wherein said selection of the category is based upon a condition, wherein the condition is selected from the group consisting of the first subset~~ is selected by a user, the selection being based on one or more of:

a location of the ~~eategory~~first subset on a computer disk drive, a LAN, or a WAN;

a location of the ~~eategory~~first subset within a database;

a URL address of the ~~category~~; first subset;

a presence of a predefined concept, keyword, or text in the ~~category~~first subset; and

an absence of a predefined concept, keyword, or text in the ~~category~~first subset.

27. (Currently Amended) The method of claim 23, wherein the ~~category comprises an~~
electronic file performing multi-dimensional analysis includes slicing-and-dicing across at least
one dimension of the set of objects.

28. (Canceled)

29. (Currently Amended) The method of claim 23, wherein ~~the step of extracting the concept~~
~~is comprises at least one of the following steps~~detected in the set of data objects, further
comprising:

(a) ~~generating a common format of the set of objects using an application~~
~~programming interface (API) to obtain;~~

~~generating a common format for~~of the selected category;~~(b) set of objects using an~~
~~extraction algorithm to obtain a common format of the selected category;~~

(c) ~~using an application to determine~~determining an image intensity of the selected
~~category~~set of objects;

(d) ~~using an application to determine~~determining at least one boundary within the
~~selected category~~set of objects;

(e) ~~using an application to map~~mapping audio waveforms within the selected
~~category~~set of objects to a text format; and

(f) ~~using an application to convert~~converting non-textual information within the
~~selected category~~set of objects into text.

30 – 32. (Canceled)

33. (Currently Amended) The method of claim 1, wherein ~~said step (iii) comprises creation of the performing multi-dimensional analysis includes creating~~ a hierarchy of the ~~set~~plurality of concepts based on user input.

34. (Currently Amended) The method of claim 23, wherein ~~said step (iii) comprises creation of the performing multi-dimensional analysis includes creating~~ a hierarchy of the ~~set~~a plurality of concepts based on user input, the plurality of concepts including the concept.

35. (Currently Amended) The method of claim 1, wherein the concept is a first concept, further comprising:

(v) —refining the ~~at least one concept based upon relationships to other concepts, performed after step (ii) and before step (iii)~~on a relationship to a second concept before performing the multi-dimensional analysis.

36. (Canceled)

37. (Currently Amended) The method of claim 35, wherein the ~~step of refining the at least one concept comprises the step of determining the relationship of the at least one concept to another concept outside of the initial set of categories~~second concept is not within the set of objects.

38. (Currently Amended) The method of claim 35, wherein the ~~step of~~concept is a first concept, the set of objects is a first set of objects, and the refining the at least onefirst concept further comprises at leastincludes one or more of the following steps:

(a) —determining a relationship of the ~~at least one~~first concept to ~~another~~a second concept within an existing reference;

(b) —determining a relationship of the ~~at least one~~first concept to ~~another~~a second concept using a natural language processing (NLP) algorithm;

(c) —determining a frequency of occurrence of the ~~at least one~~first concept within the ~~initial~~first set of ~~eategories~~objects;

(d)——determining a frequency of occurrence of the ~~at least one~~first concept within an ~~outside~~a second set of ~~eategories~~objects different from the first;

(e)——determining a normalized frequency of occurrence of the ~~at least one~~first concept within the ~~initial~~first set of ~~eategories~~objects; and

(f)——determining a normalized frequency of occurrence of the ~~at least one~~first concept within the ~~outside~~second set of ~~eategories~~objects.

39. (Canceled)

40. (Currently Amended) The method of claim 23, wherein the concept is a first concept, further comprising:

(v)——refining the first concept based ~~upon relationships to other concepts in an initial set of concepts, performed after step (ii) and before step (iii)~~on a relationship to a second concept before performing the multi-dimensional analysis.

41. (Canceled)

42. (Currently Amended) The method of claim 40, wherein ~~said refining step comprises: determining the relationship of the first concept to another concept outside of the initial set of categories; the set of objects is a first set of objects, and the second concept is present in a second set of objects different from the first set of objects.~~

43. (Currently Amended) The method of claim 40, wherein ~~said refining step comprises at least one of the following steps~~the concept is a first concept, the set of objects is a first set of objects, and the refining the first concept includes one or more of:

(a)——determining a relationship of the first concept to ~~another~~a second concept within an existing reference;

(b)——determining a relationship of the first concept to ~~another~~a second concept using a natural language processing (NLP) algorithm;

(e)——determining a frequency of occurrence of the first concept within the ~~initial~~first set of ~~categories~~objects;

(d)——determining a frequency of occurrence of the first concept within an ~~outside~~a second set of ~~categories~~objects different from the first;

(e)——determining a normalized frequency of occurrence of the first concept within the ~~initial~~first set of ~~categories~~objects; and

(f)——determining a normalized frequency of occurrence of the first concept within the ~~outside~~a second set of ~~categories~~objects.

44. (New) The method of claim 23, wherein the step of performing multi-dimensional analysis further comprises at least one of the following steps:

generating reports based on the analysis; and

displaying results of the analysis in a visual format.

45. (New) The method of claim 1, further comprising:

receiving from a user a selection of a first subcategory and a second subcategory from among a plurality of subcategories associated with the first subset of objects, the first subcategory being associated with a first sub-subset of the first subset and the second subcategory being associated with a second sub-subset of the first subset, each of the first and second sub-subset including one or more objects;

performing multi-dimensional analysis on the concept to determine a presence or absence of the concept in each of the first sub-subset and the second sub-subset;

for each of the first sub-subset and the second sub-subset, if the concept is present in that sub-subset, providing an indication of a strength of presence of the concept in that sub-subset; and

if the concept is absent from that sub-subset, providing an indication of an absence of the concept from that sub-subset, the indication of the absence including a reference to the concept and the subcategory that is associated with that subset.

46. (New) The method of claim 1, further comprising:

receiving from a user a selection of a subconcept from a plurality of subconcepts associated with the concept;

performing multi-dimensional analysis on the subconcept to determine a presence or absence of the subconcept in each of the first subset and second subset;

for each of the first subset and the second subset, if the subconcept is present that subset, providing an indication of a strength of presence of the subconcept in that subset; and

if the subconcept is not present in the second subset, providing an indication of an absence of the subconcept from the second subset, the indication of the absence including a reference to the subconcept and the second category.

47. (New) The method of claim 1, further comprising:

receiving from a user a selection of a subconcept from a plurality of subconcepts associated with the concept;

receiving from a user a selection of a first subcategory and a second subcategory from among a plurality of subcategories associated with the first subset of objects, the first subcategory being associated with a first sub-subset of the first subset and the second subcategory being associated with a second sub-subset of the first subset, each of the first and second sub-subset including one or more objects;

performing multi-dimensional analysis on the subconcept to determine a presence or absence of the subconcept in each of the first sub-subset and the second sub-subset;

for each of the first sub-subset and the second sub-subset, if the subconcept is present in that sub-subset, providing an indication of a strength of presence of the subconcept in that sub-subset; and

if the subconcept is absent from that sub-subset, providing an indication of an absence of the subconcept from that sub-subset, the indication of the absence including a reference to the subconcept and the subcategory associated with that subset.